

# USE AND MAINTENANCE MANUAL

## *WHEELIFTER*

**ART. 3473N**





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## 1. INTRODUCTION

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Wheelifter 3473 is designed for the handling of the tire during the operations of assembly and disassembly on the vehicle. Carefully read and follow the operating instructions in any work situation, in order to avoid the damage and the risks deriving from the use of the equipment.

The Tire lifter Wheelifter 3473 is designed exclusively for lifting, lowering and transporting tires for cars inside garages or tire replacement centers. The equipment should not be used in the presence of explosive atmospheres.

Any use of the lift, which is not as specified in this manual is to be considered improper.

For a proper use of the equipment, it is recommended and it is considered necessary that operator follows all instructions reported in this manual and that inspections and maintenance are executed as set in the manual.

TECNOLUX s.r.l. will not be responsible in any way for damage or injury that are the consequence of improper use of the equipment.

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### 1.1. WARRANTY TERMS

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Warranty terms are applied according to sale contract. The warranties and liability for personal injury and / or material will expire if at least one of the following points occurs:

- a) Misuse
- b) Incorrect assembling
- c) Maintenance and inspection of the equipment not correctly performed
- d) The lift is used with protective devices that are not working or not properly installed
- e) Instructions regarding the handling, assembly, maintenance and use are not followed
- f) Parts subject to wear and / or deterioration are not replaced
- g) Damage caused by agents and / or external causes or natural events

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## 1.2. SECURITY

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It is strictly forbidden the use the lift to unqualified people, people who do not know the operating instructions of use and who have not read the manual. Using the lift, operator must be aware of the basic safety standards .

The safety and operating instructions specified in this manual should be considered in addition to the safety rules already set out for the place where the lift is in use.

For a safe use of the lift it is necessary to observe the following points:

- a) The lift must be used only for the purposes for which it was conceived. It means that it has to be used to lower or lift the wheel during mounting or dismounting it
- b) Defects , non-compliance, malfunction must be reported and corrected immediately
- c) If you find any defects, malfunctions or non-compliance, the lift should not be used until these have been rectified .
- d) Make sure that the lifter is working correctly after the assembly and initial operation .
- e) When charging the battery make sure that the power cord is not in corridors or transit area
- f) Do not use and / or operate the lift in explosive atmospheres
- g) Before you lift or lower the load, ensure that the tire is stable and well supported so that it cannot fall .
- h) Lower the tire completely before transporting
- i) Use the lift only on flat floors and free of obstructions
- j) Ensure that the use of the lift will not cause damage to other people
- k) Keep the area free where the lift is used from obstacles
- l) Do not enter into movement area of the lift
- m) Do not exceed the allowed maximum loading
- n) Perform lifting, lowering and transporting without sudden movements
- o) Repairs on the lift can be operated only by qualified persons

It is compulsory that operators who use the lift are informed concerning workplace safety, risks prevention, lift operation and they have read, understood and accepted by signature of the instructions and warnings in this paragraph.

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### **1.3. SPECIAL WARNINGS**

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Before starting any maintenance or repair, disconnect the wheelifter from any power supply. Take particular care not to mix up, confuse or incorrectly connect any electrical connection. Take care not to come into contact with the battery pholes! Protect them and make sure they are electrically isolated before handling the batteries.

Before opening the compartment containing the electrical equipment, the engine, make sure that emergency button is pressed.

Before working on any electrical or mechanical parts or movement parts (eg motor, pulleys, belts, etc.), disconnect the batteries and make sure that the lift can not accidentally come into operation.

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### **1.4. PRECAUTIONAL AND ORGANIZATIONAL ACTIONS**

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The operating instructions given in this manual must be kept in a place near the area of use of the lift and accessible at any time.

In addition to these operating instructions and safety rules, all other rules relating to the prevention of and protection from risks should be considered and implemented. It is advisable to monitor the operators to ensure they are operating in accordance with the safety standards and that they are using all safety devices required.

Make sure all safety instructions and usage on the lift are clearly readable.

Do not make any modifications to the lift without the approval of the manufacturer .

Use only original spare parts.

Perform periodic inspections as indicated in the manual.

In case of detected malfunction, immediately turn off the lift and make sure that it can not be used. Repair the fault as soon as possible .

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## 2. TECHNICAL DATAS

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### 2.1. WHEEL LIFTER

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TECHNICAL DATAS	M.U.	
Width	mm	755
Length	mm	730
Height	mm	1710
Working height	mm	1100
Maximum height at wheel hub	mm	1400 *
Weight	Kg	55
Maximum speed	m/sec	≈0,1
Maximum loading	kg	50
		60 (for sporadic use)
Operational temperature	°C	Min -5 Max +45
Batteries	Nr	2
Bat. Voltage	V	24
Bat. Capacity	Ah	12
Charge tension	V ac	220

\* the data is connected to tire dimensions

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### 2.2. POWER SUPPLY CABLE

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The lift is equipped with a power cord to charge the batteries.

CABLE FEATURES		M.U.	
Length		mm	2000
Cable type		-	Three poles cable 3x0,75 mm <sup>2</sup>
Plug		-	Europe type (CEE7/VII)
	Only for Swiss market		Type J (SWITZERLAND - SEV 1011)
Outlet		-	IEC C13
Working tension		V	250
Nominal power		A	16
Protection level		--	IP 20
External coating		-	PVC
Outlet cable		-	angled

### 3. TRANSPORT AND ASSEMBLING

Wheelifter 3473 is delivered packed in a carton box on a pallet. It is required a suitable means of handling (such as a transpallet)

Inside the box you will find:

- 1) The main body (composed by the base, column, handle)
- 2) The brackets with wheels
- 3) The lifting forks

The assembly of parts must be carried out according to the following scheme (Figure 1)

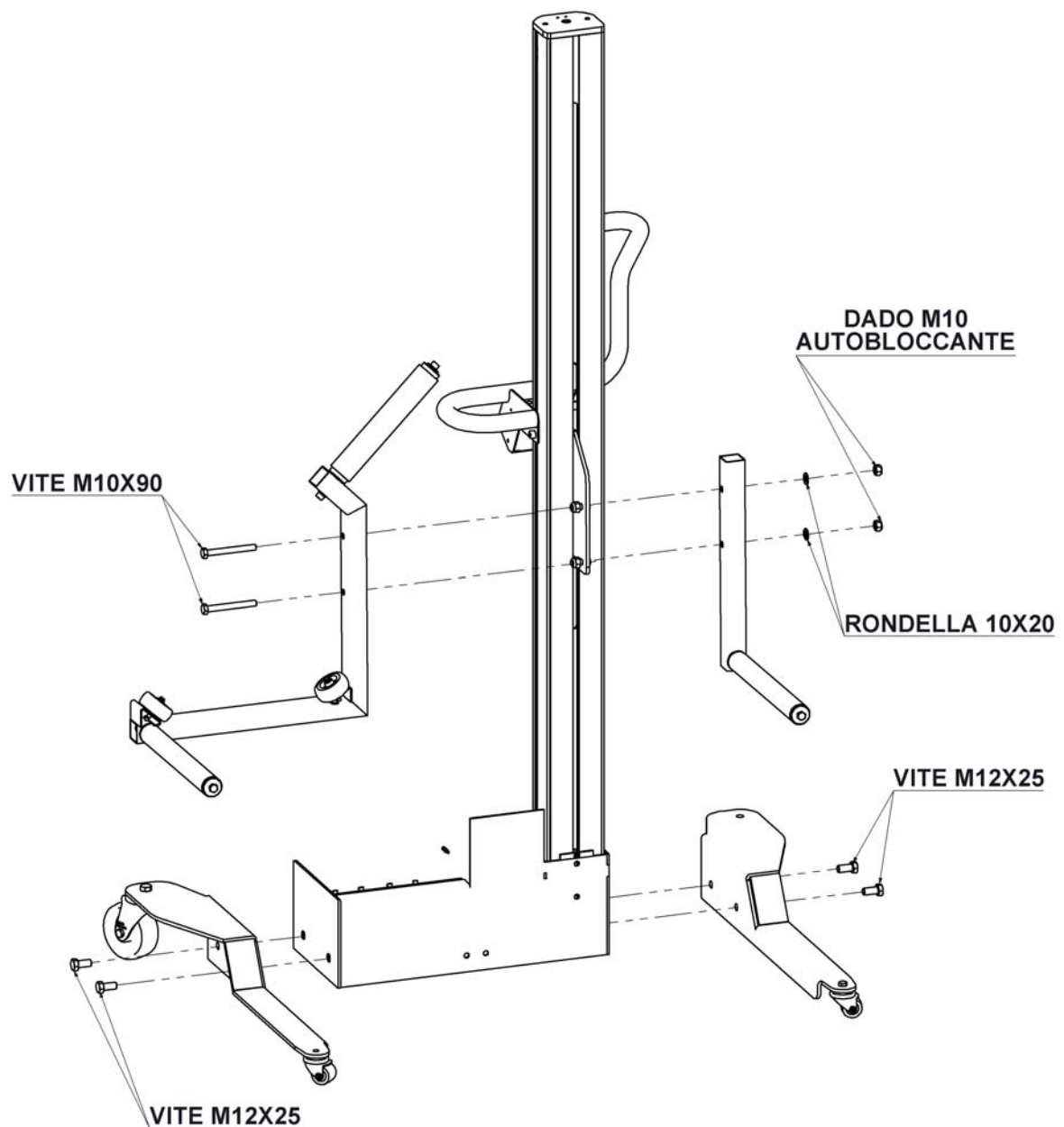


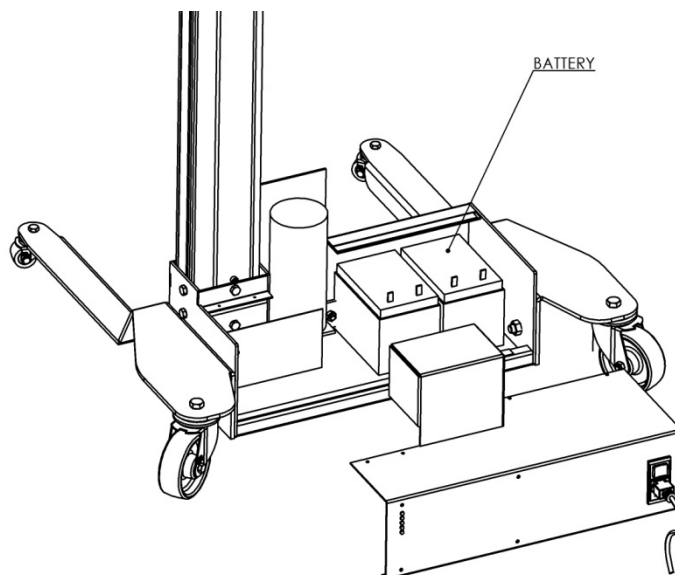
Figure 1 - Assembling



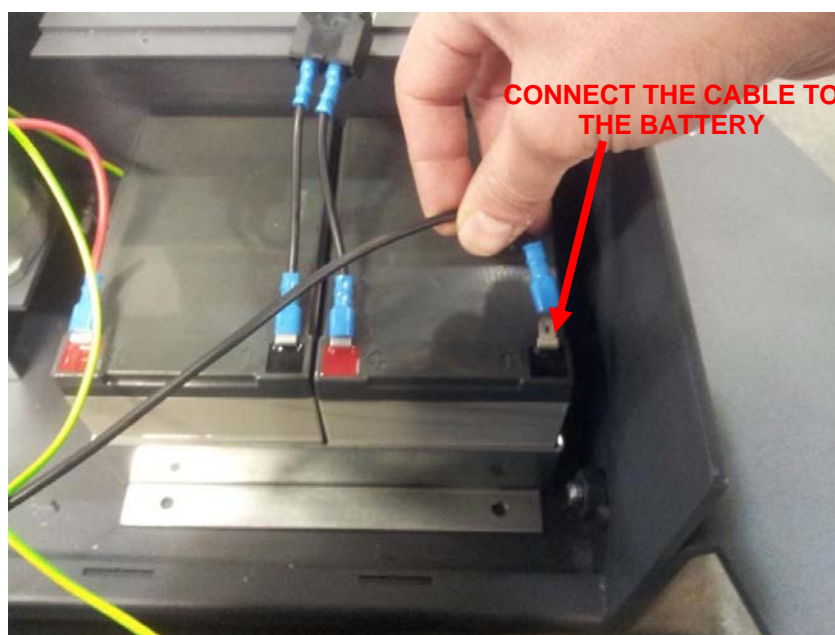
In order the lifter to operate you need connect the battery and remove any protective packing inside the engine compartment.

To connect the battery follow the step below:

- 1) Press the emergency button
- 2) Open the cover of the base (engine compartment)
- 3) Connect the batteries as shown in Figures 2 and 3.
- 4) Close the engine compartment.
- 5) Release the emergency button



*Figure 2 – Engine compartment opening*



*Figure 3 – Connection to the battery*

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## 4. USE

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### 4.1 BATTERIES CHARGE

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This machine is equipped with an internal electronic battery charger with LED indicators on the state of charging. We recommend before using this machine to make a first recharge.

To charge the batteries connect the power cord to the power of the machine, connect the other end to the 220 V ac main supply.

Turn on the charger through the switch on the machine. The LEDs indicate the charging status automatically. It is recommended to recharge the batteries when the charge state of the indicator LED is yellow, without waiting for the battery is fully-discharged.



**ATTENTION!**

Unplug the power cord from the wall outlet before removing the plug from the machine.



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### 4.2 CONTROLS AND USE INSTRUCTIONS

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The commands to start the forks are placed under the handle for the manual handling / transport of the lift. To raise the forks press the white button in its upper part. To lower the forks press the white button in its lower part. When you release the button, the movement of the forks will stop automatically.

If there are malfunctions immediately press the red emergency button which will immediately stop the power supply to the machine.

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### 4.2.1 LOADING AND UNLOADING

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Lower the forks until the inferior stop point. Place the wheel so that the outer part of the metallic rim is placed toward the operator side and rests against the oblique roller.

Before giving the lifting command, make sure the wheel is properly supported, is stable and cannot fall out easily. Make sure that the wheel resting on the forks can rotate freely without the rim can be damaged.



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### 4.2.2 LOADING AND UNLOADING

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Before moving the lift to transport the wheel, ensure that there are no obstacles on the floor.

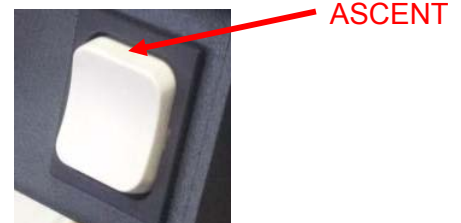
Transport the wheel only with the forks fully lowered. Transport the wheel only on flat floors and stable

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### 4.2.3 WHEEL LIFTING

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To lift the forks press the white button in its upper part. During lifting make sure that the wheel and can not hurt any obstacle



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### 4.2.4 WHEEL LOWERING

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To lower the forks press the white button in its upper part. During lowering make sure that the wheel does not fall down and can not hurt any obstacle.

After more than 5 minutes of inactivity , the wheelifter goes into standby mode. To restart it press the button up/down.



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### 4.3 LED LIGHTS SIGNALS

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Led lights on the base of the wheelifter:

BLINKING TYPE	COLOUR	MEANING
Fixed LED	Green or Yellow	Battery charging level
Fixed LED	Red	Discharged Battery
Fast blinking LED	Red	Pressed emergency button
2 fast blinking + pause	Red	Overload of maximum loading capacity
Slow blinking LED	Red	engine temperature too high

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## 5. MAINTENANCE

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In order to obtain a state of optimum service it is necessary to perform regular maintenance on the lift every 3 months. If the lift operates in dusty environment, it is advisable to perform maintenance more frequently.

Before performing any maintenance keep in mind that:

- 1) All maintenance shall be performed only by qualified persons
- 2) There must be no load on the lift
- 3) The batteries of the lift should not be placed in charge during maintenance.
- 4) The lift must not be connected to the main supply.
- 5) During the operations of maintenance and / or replacement of spare parts, the equipment and the spare parts have to be displaced in an easily usable way and the lifter in such a way to facilitate intervention without compromising functionality.



### **ATTENTION!**

- 1) Before performing any maintenance operation, press the emergency button and disconnect the batteries to avoid any risk of unexpected activation of the lift.

The following is an illustrative list of the frequency of maintenance operations.

	Daily	Every 3 months
Battery charge	x	
Cleaning	x	
Control on power supply cable control for battery charger		x
Control on screws tightening		x
Control on wheels for transport		x
Control on emergency button functioning		x
Trapezoid screw greasing		x
Sliding runners greasing		x

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## **5.1. CLEANING**

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Do not use pressure washers or high pressure cleaning systems  
Use standard detergent and dry thoroughly after cleaning

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## **5.2. POWER SUPPLY CABLE CONTROL**

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Check that the cable is in good condition and that there are no bare wires and plugs are intact.

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## **5.3. WHEELS CHECK FOR TRANSPORT**

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Make sure that all the wheels move smoothly on their axis of rotation and the axis of orientation.  
Check that the screws are tight  
Check that the wheels do not present excessive wear.

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## **5.4. EMERGENCY BUTTON CONTROL**

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Perform the following tests:

- 1) Operate the lift and test that it stops when you press the emergency button.
- 2) Repeat the operation for both the operation during up and down operation.
- 3) Press the emergency button and make sure that the lift doesn't respond to the command of climb
- 4) Press the emergency button and make sure that the lift doesn't respond to the command of descent.

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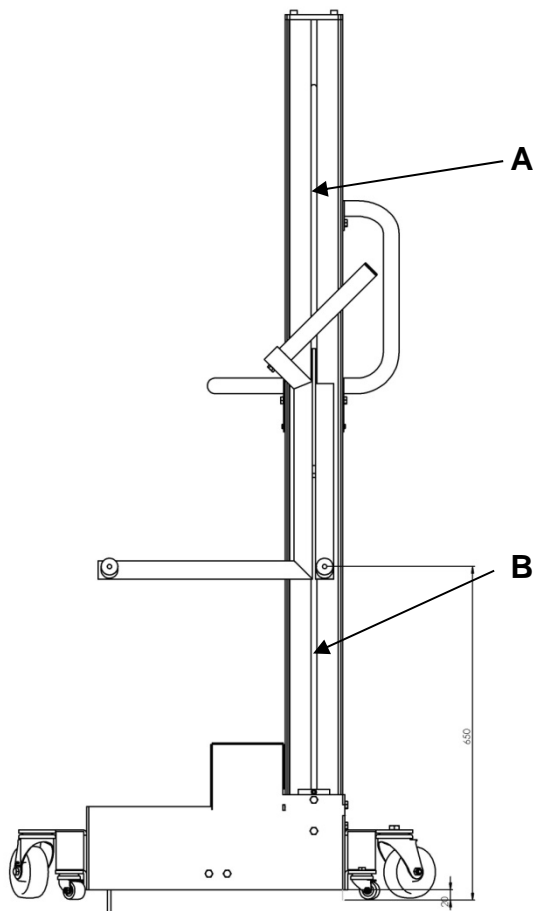
## 5.5. TRAPEZOID SCREW AND RUNNERS GREASING

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To grease the trapezoid screw and sliding surfaces of the skates perform the following operations:

- 1) Set the forks at about the halfway point (60-65 cm from the floor)
- 2) Press the emergency button
- 3) Make sure the power cord is disconnected
- 4) Open the cover of the engine compartment and disconnect one of the battery pole
- 5) Grease the trapezoid screw and sliding surfaces of the skates accessing from the slot on the side of the forks. Put the oil both above and below the forks, at the points A and B as shown in figure
- 6) Connect the batteries and close the cover of the engine compartment
- 7) Release the emergency button
- 8) Make a few complete runs of the fork to allow the oil to spread evenly.

Use the following grease for bearings AREXON GC300 or equivalent.



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## **5.6. BATTERIES REPLACEMENT**

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It is possible that during the life of the lift batteries need to be replaced.  
To do this proceed according to the instructions specified below:

- 1) Press the emergency button and make sure that the lift is not connected to any power source.
  
- 2) Open the casing of the engine compartment
  
- 3) Disconnect all battery cables
  
- 4) Remove the batteries and new batteries
  
- 5) Reconnect the cables to the batteries, being careful not to reverse or confuse the wires (see wiring diagram)
  
- 6) Close the cover of the engine compartment
  
- 7) Dispose of old batteries



## 6. BREAKDOWN CAUSES OR INTERRUPTION

The arrest of the lift or an irregular functioning of it may be due to a few simple reasons shown in the following table.

If it proves impossible to identify the cause of the malfunction, please contact our technical department.

<i><b>DETECTED PROBLEM</b></i>	<i><b>POSSIBLE CAUSE</b></i>	<i><b>WHAT TO DO</b></i>
Non functioning or irregular functioning Ascent/descent	Uncharged batteries	Charge the batteries
	Exceed maximum loading	Remove the loading and test the functioning of the unit
	Fuses	Check the 20A fuse between the two batteries and replace it if necessary
	Engine overheating	Wait for engine cooling down (to shorten the time open engine compartment)
Batteries cannot be charged	Defective battery	Check batteries voltage (2x12V)
	Non functioning battery charger	Check all connections between batteries and control board
	Fuses	<ul style="list-style-type: none"> <li>• Check the 20A fuse between the two batteries and replace it if necessary</li> <li>• Check the fuse on the power supply plug for battery charging and replace it if necessary</li> </ul>
	Batteries are completely exhausted	Replace the batteries

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## 7. DISPOSAL

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### IMPORTANT INFORMATION

According to art. 13 of Legislative Decree July 25, 2005 , n . 151 "Implementation of Directives 2002/95/EC , 2002/96/EC and 2003/108/EC relating to the reduction of use of hazardous substances in electrical and electronic equipment and waste disposal"

The crossed-out dustbin symbol indicates that the product at the end of its life must be collected separately from other waste.

The user should, therefore, take the equipment at the end of its useful life in separate collection of electronic and electrical waste, or return it to the dealer when purchasing a new equivalent product.

The separate collection for the subsequent forwarding of recycling, treatment and environmentally compatible disposal contributes to avoid possible negative effects on the environment and human health and promotes recycling of the materials.

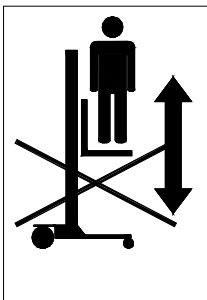
Improper disposal of the product by the user entails the application of administrative sanctions referred to in Legislative Decree no. N.22/1997 (Article 50 and following of Legislative Decree no. N.22/1997 ) .

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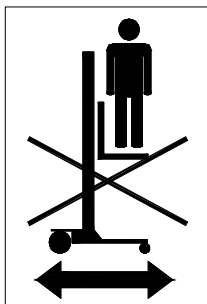
## 8. STICKERS ON WHEELIFTER

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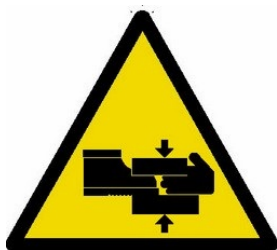
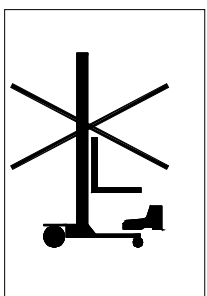
Stickers with following information are sticked on the wheelifter:



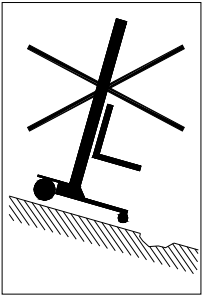
Don't use the wheelifter to lift persons



Don't use the wheelifter to transport persons



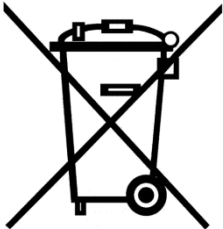
Don't put parts between forks and floor or between forks and base brackets



Don't use the wheel lifter on unflat floor



Don't come up on the wheel lifter



Dispose the wheel lifter at the end of life cycle (paragraph 7)



Danger of cutting

Maximum load capacity (indication positioned on the forks of the lift)

(for occasional use can be considered a maximum capacity of 60 kg)

Portata/Capacity:

**60 Kg MAX**

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**9. SECURITY CONTROLS SUMMARY SHEET**

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In order to grant security on wheelifter use, it is necessary to perform periodically the following controls (paragraph 5 for more detailed information)

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**SECURITY CHECKS**

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Check the presence of sticker indicating model, serial number of wheelifter

Check that all stickers with use indications (loading capacity, use instructions) are visible

Check that all parts are complete and intact, stable and without breakage or deformities

Check that all screws are well tighten

Check that cables and electrical connections are in good conditions

Check that power supply cable of battery charger is in good condition

Test that wheelifter is working with or without loading

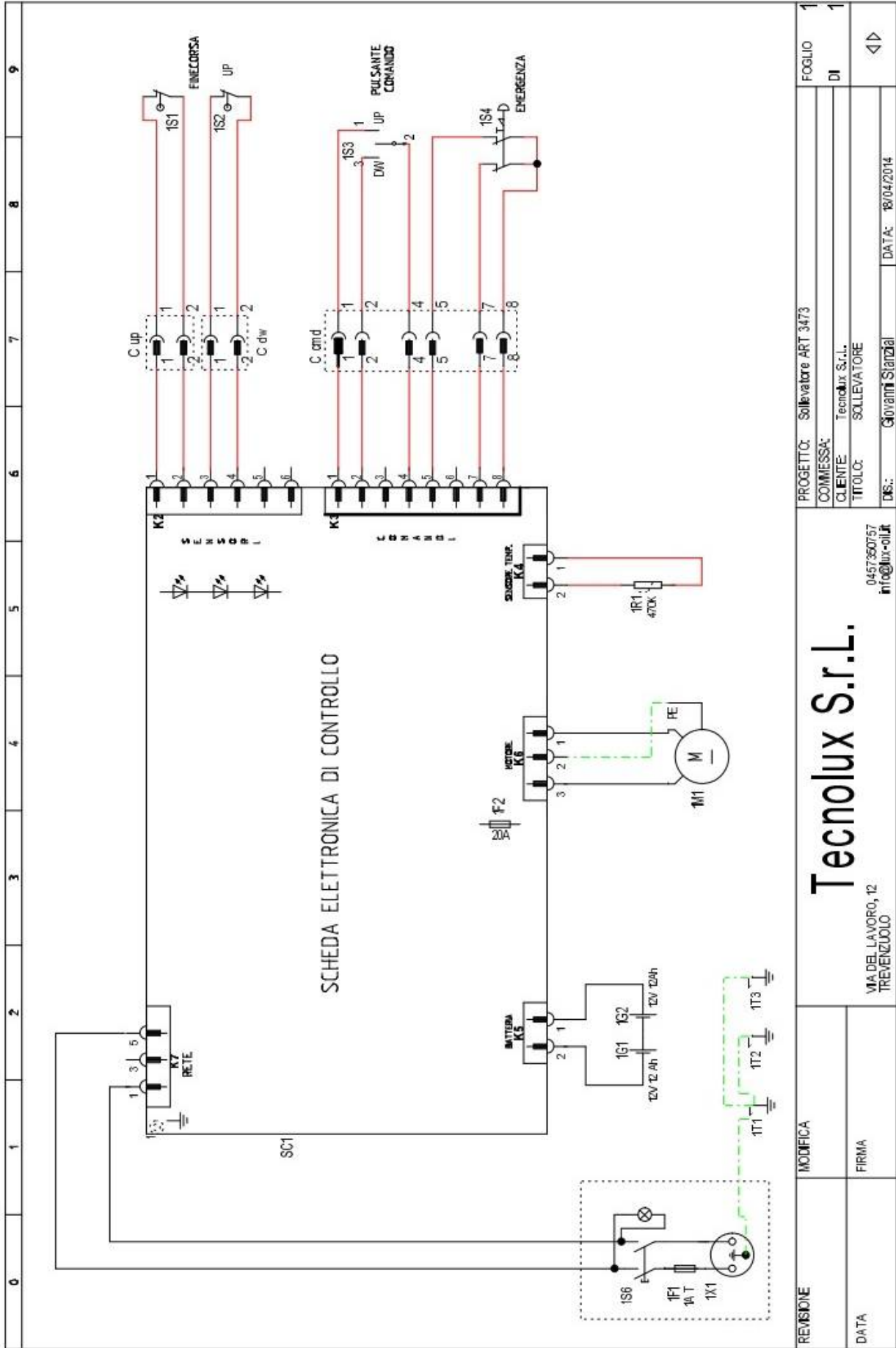
Check that the emergency button is working

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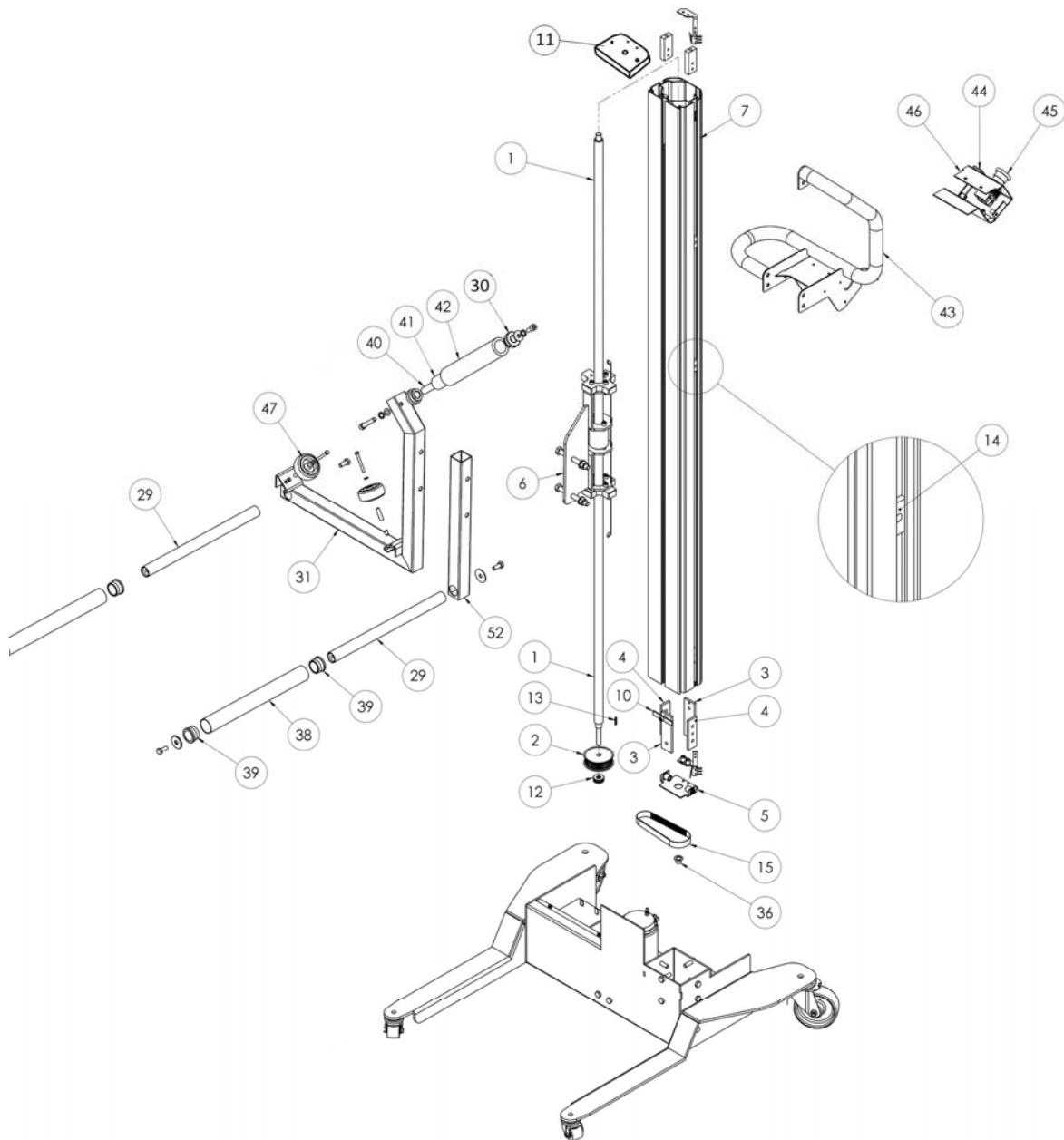
<b>SERIAL NUMBER :</b>	<b>YEAR OF CONSTRUCTION :</b>	<b>MODEL :</b>

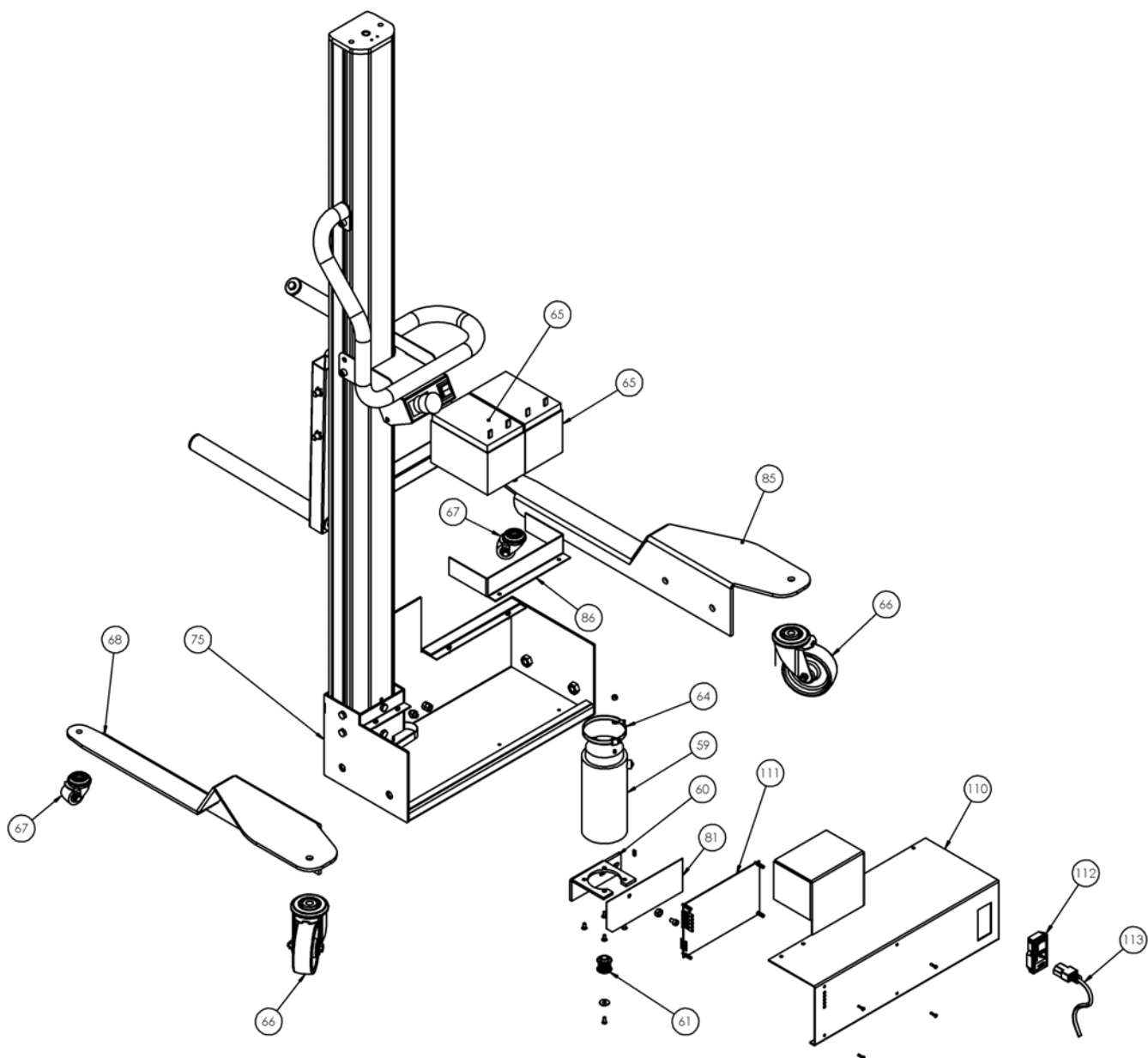
<b>DATE</b>	<b>MALFUNCTION</b>		<b>ADDITIONAL CONTROL</b>	<b>SIGNATURE</b>
	<b>YES</b>	<b>NO</b>		

# 10. ELECTRICAL SCHEME

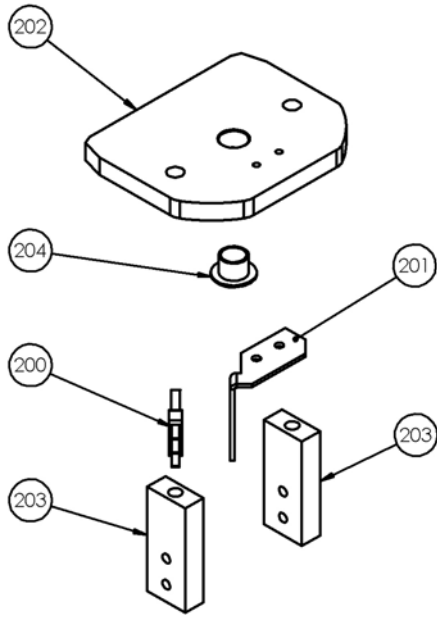


## 11. EXPLODED VIEW

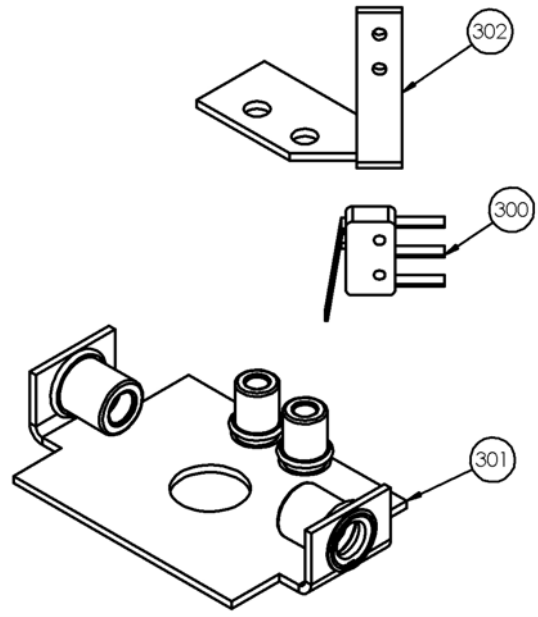




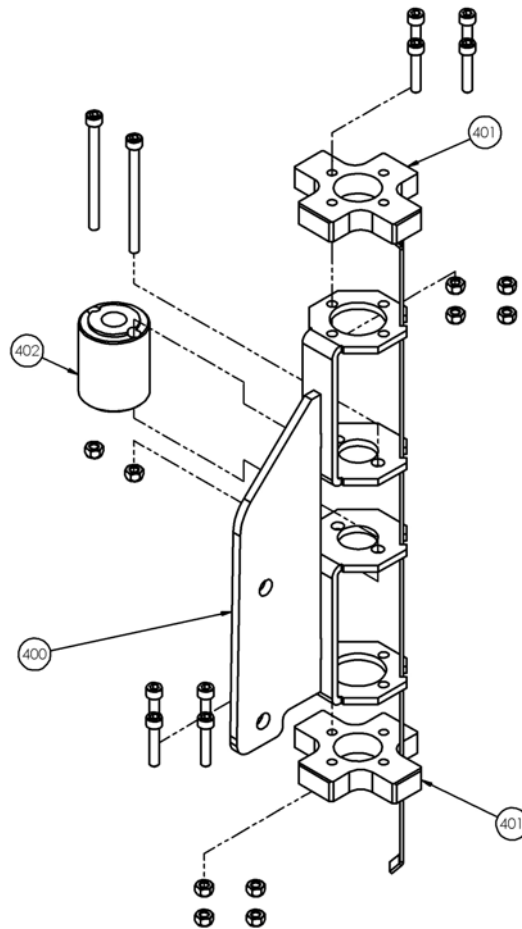
**DETAIL 11**  
**UPPER PART**



**DETAIL 5**  
**INFERIOR PART**



**DETAIL 6**  
**COMPLETE SLIDER**





SPARE PARTS LIST			
REF.	CODE	DESCRIPTION	QTY
1	034720014	TRAPEZOIDAL SCREW 20x8(P4)	1
2	034720016	DRIVEN PULLEY HDT 5M-15 Z=40	1
3	034710104	LARGE FLANGE	2
4	034710105	TIGHT FLANGE	2
5	034710135	COMPLETE INFERIOR CLOSING FOR WHEEL LIFTER COLUMN	1
6	034710132	COMPLETE SLIDING SYSTEM	1
7	034720017	L=1610 mm WHEEL LIFTER COLUMN	1
10	034710112	FRONTAL MATCHING PART PLATE	1
11	034710134	WHEEL LIFTER COMPLETE HEAD 3473	1
12	ND1010011	AXIAL BEARING 10/24 - 51100	1
13	ND0060003	FLAP 3x3 lg.20 - UNI6604 A	3
14	034710143	PIASTRINA FISSAGGIO MANIGLIA SOLLEVATORE	1
15	034730014	BELT HDT 15 M5 Lg.405 (ref motor 034730008)	1
	034730017	BELT HDT 15 M5 Lg. 400 (ref motor 034730015)	
30	034620033	BUSHING For BUMPER TUBE Ø35	2
31	034710228	LEFT FORK SUPPORT HOSE	1
32	034730003	PLASTIC HOSE FOR 350 mm FORK	2
33	034710085	FORK 350 mm	2
36	034710056	18° SLOPING ANTI BUMP FORK	1
37	034730004	PLASTIC HOSE FOR SLOPING ANTIBUMP	1
43	034710110	COMPLETE HANDLE FOR WHEEL LIFTER 3473	1
44	402030003	BIPOLAR SWITCH 3 POS C/N T/B B41J41200000	1
45	402040044	EMERGENCY BUTTON D.22 MM	1
46	034710111	WHEEL LIFTER DASHBOARD CARTER SERIES 3473	1
49	ND1030008	SELF LUBRICATED FLANGED BUSHING DU 12x10 LG.=10	1
52	034710083	FORK HOSE 1	1
59	034730015	MOTOR 24V MP56- 200 W - 2000 rpm	1
	034730008	MOTOR 24V MP56- 150 W - 1500 rpm	
60	034710108	ELECTRICAL MOTOR SUPPORT FOR WHEEL LIFTER SERIES 3473	1
61	034720015	DRIVEN PULLEY HDT5M-15 Z=15 (for motor 034730015)	1
	034720010	DRIVEN PULLEY HDT5M-15 Z=20 (for motor 034730008)	
64	NG0010018	SCREWED O-RING DIAM. 60/80	1
65	402040072	BATTERY 12V 12Ah (REMCO)	2

66	NR1010033	TURNING WHEEL D.100 NYLON+POLIURETANO RED- HUB ON ROLLERS	2
67	NR1010034	POLYURETHANE ROLLER D.35 WITH TURNING SUPPORT- HUB ON BUSHING	2
68	034710119	COMPLETE RIGHT WHEELHOLDER BRACKET	1
75	034710109	COMPLETE BASE WHEEL LIFTER SERIES 3473	1
81	034710116	GALVANISED CARTE FOR BELT	1
82	ND1030008	SELF LUBRICATED FLANGED BUSHING DU 12x10 LG.=10	1
85	034710120	COMPLETE LEFT WHEELHOLDER BRACKET	1
86	034710144	BATTERIES SEAT BRACKET	1
110	034710121	MOUVABLE CARTER FOR WHEEL LIFTER BASE	1
111	034730009	CONTROL BOARD	1
112	402040061	PLUG INT. LUM RED+ FUSE HOLDER 10A	1
113	402040061 Schuko plug	THREEPOLAR POWER SUPPLY CABLE Lg. 2 m	1
	402040078 Svizzera plug		1

200	402020016	DEVIATOR 3A 125V WITH BRAKE	1
201	034710115	GALVANISED PANEL SUPPORT FOR UPPER MICROSWITCH	1
202	034720020	STAINLESS STEEL UPPER HEAD	1
203	034720021	HEAD STAINLESS STEEL SUPPORT	2
204	ND1030007	SELF LUBRICATED FLANGED BUSHING DU 14x12 Lg.10	1

300	402020016	DEVIATOR 3A 125V WITH BRAKE	1
301	034710113	GALVANISED PANEL FOR COLUMN INFERIOR CLOSURE	1
302	034710114	GALVANISED PANEL SUPPORT FOR INFERIOR MICROSWITCH	1

400	034710118	COMPLETE SLIDER SUPPORT	1
401	034720018	CROSSED SLIDER SP.15 mm	2
402	034720019	PLASTIC SCREW NUT TR 20x8(P4)	1